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ABSTRACT

Although the effect of teacher expectations on student performance has been well documented, little research has focused on the effect of teacher personality styles on student-teacher interactions. To investigate the effect of teachers' locus of control and their expectations of their own effectiveness on student success, 77 female college students enrolled in undergraduate psychology classes were administered the Rotter Locus of Control Scale; subjects scoring in the upper and lower one third of the distribution were then assigned to one of four treatment conditions: positive/negative student expectation or positive/negative teacher expectation. They were then assigned as teachers in a contrived session in which each teacher taught a student confederate an eleven-word vocabulary list and administered a quiz. After the lesson, teachers rated their attitudes toward the student, the lesson, and their performance. An analysis of the results showed that teachers in the positive student expectation group rated the student as having more ability than did those in the negative condition; and teachers in the positive teacher expectation condition thought they had significantly more ability than those in the negative teacher condition. Teachers in the positive teacher expectation condition also tended to rate their students more positively. Subjects with an internal locus of control were more susceptible to information about their students' competence than were subjects with an external locus of control. Neither internal nor external locus of control subjects showed any susceptibility to information about their own expected ability. (BL)

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Personality Factors and Expectation Effects in Teacher-Student Interaction

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The proposition that a teacher's expectations about a student can have deleterious or helpful effects in the student's scholastic performance has received much investigation, and the phenomenon in which a teacher transmits his or her performance expectations to a student and subsequently causes the expected behavior to occur has been well documented (e.g., Braun, 1976; Rosenthal, 1974). Recent research has gone beyond demonstrating the existence of the phenomenon and has been aimed at determining the mediators of the effect. For example, Babad and Inbar (1981) found evidence that teachers high or low in susceptibility to biasing information about students differed on a number of self-report measures, including indirect evidence that authoritarian personality styles were related to greater susceptibility to biasing information.

In all research to date, though, only susceptibility to information pertaining to the student's expected performance has been investigated, restricting the findings to a rather limited set of circumstances. In ongoing teacher-student interactions, it seems reasonable that expectations would not be limited just to information regarding the student; instead, teachers presumably bring expectations about such aspects of the situation as their own teaching ability and the subject matter. Because a good deal of evidence shows that expectations about, for instance, one's own ability affects performance and attitudes (Rappaport & Rappaport, 1975; Zanna, Sheras, Cooper, & Shaw, 1975), we could assume that such expectations also would affect the teacher's performance.

The study to be reported here today examines the joint effect of teachers' expectations regarding their own likely effectiveness and that of their student's probable success. Additionally, it examines a person-

ality factor that is likely to mediate the relationship between self- and student-expectations, that of teacher locus of control. Locus of control (Rotter, 1966) refers to the way in which individuals characteristically attribute an outcome to either their own behavior (an internal orientation) or to the behavior of others, to chance, or to fate (an external orientation). The concept of locus of control suggests a means for clarifying the nature of teachers' susceptibility to biasing information. We might expect that teachers with an internal locus of control would tend to be most susceptible to information that concerns their own likely effectiveness as teachers, since they are apt to attribute outcomes to their own performance. On the other hand, teachers with an external orientation would likely be most susceptible to information regarding their student's probable performance, given their tendency to attribute outcomes to causes external to themselves.

At least partial support for this reasoning comes from a study we carried out in our laboratories (Feldman, Saletsky, Sullivan, and Theiss, 1983) in which we examined the relationship between student locus of control and susceptibility to biasing information. Acting as students, subjects with either an internal or external locus of control were led to hold positive or negative expectations about their own probable success and that of their teacher. At least for internal subjects, the previous reasoning held: Internal subjects were more receptive to information regarding self than were external subjects. However, contrary to the hypothesis, expectations regarding the teacher were not differentially affected according to the locus of causality of the student.

Other evidence that internal and external subjects will be differentially affected by the nature of performance expectations comes from a

study which looked at subjects who were led to believe that they would fail at a task (Pittman & Pittman, 1979). Internal subjects showed greater reductions in performance subsequently than did external subjects, suggesting that the internals were more susceptible to information about their own proficiency than externals. It also may be inferred that externals might be more susceptible to information about others' future performance than internal subjects.

Based on the prior evidence and reasoning, we conducted an experiment examining the interaction between teacher locus of control and responsiveness to expectancy information regarding the teachers' own probable performance and their student's likely success on a lesson. Using a teaching context, subjects who had been screened on a measure of locus of control were placed in the role of teacher and asked to teach a standardized lesson to a student (confederate). Just before teaching the lesson, subjects were given information concerning their own probable success as a teacher (teacher expectation manipulation) and about the likely performance of their student (student expectation manipulation). Subjects then taught the lesson. Subsequently, subjects were administered the dependent measure, which consisted of inventories of subjects' attitudes towards their student and ratings of their own performance. It was expected that internal subjects would be more susceptible to the expectancy regarding their own performance as teachers (teacher expectation manipulation) than would external subjects, while externals would be more susceptible to expectancy information regarding their student's performance (student expectation manipulation) than would internals.

Method

Subjects who acted as teachers were 77 female undergraduates enrolled in psychology classes at a large state university. Subjects received extra class credit for participation.

Prior to the experimental session, individuals eligible for participation were administered the Rotter Locus of Control Scale (Rotter, 1966). This well-validated measure asks subjects to indicate their choice of agreement to a series of 29 pairs of statements. For example, subjects are asked to choose between "many of the unhappy things in peoples' lives are partly due to bad luck" (scored externally) and "peoples' misfortunes result from mistakes they make" (scored internally). Scores on the scale ranged from 1 to 21, with 11 at the median. Only individuals falling into the upper and lower third of the distribution were used to form the internal and external sample; thus internal scores ranged from 13 to 21, and external scores ranged from 1 to 8.

Each subject later was contacted and asked to come individually to a second session. Two people (actually one subject and a confederate) came to the session and were told that the purpose of the experiment was to study different teaching strategies and methodologies that people use to convey information to one another, and that one subject would act as "teacher" and one as "student." To determine who would be in which role, a rigged drawing was held, and the actual subject was designated as teacher, and the confederate (who was the same person in all experimental sessions) was designated as student.

The subject (now teacher) and confederate (student) were shown briefly an eleven-word vocabulary list and quiz and were told that the

teacher was to instruct the student on the list and then to administer the quiz later. The confederate was then asked to leave the room, ostensibly in order for the experimenter to orient and familiarize the teacher with the words.

When alone with the teacher, the experimenter briefly explained the lesson and then administered the treatment expectations. Subjects were randomly assigned to the student expectation condition and self expectation condition as follows:

Student expectation manipulation. Subjects were told that, on the basis of scales the student had earlier completed, the student would likely perform well or poorly on the subsequent lesson. In the positive student expectation condition, subjects were told that their student was outstanding and would have little difficulty with the words. In the negative student expectation condition, subjects were told that their student would experience a good deal of difficulty with the words. Thus, subjects were given either a positive or negative expectation regarding their student.

Teacher (self) expectation manipulation. Following assignment to a student expectation condition, teachers were then randomly assigned to the teacher (self) expectation condition. In the positive teacher (self) expectation condition, subjects were told that, based on their responses to the scale they had completed at the earlier session, they would likely do an excellent job in teaching the lesson to the student. In the negative teacher expectation condition, subjects were told that they would likely experience difficulty and would not be particularly proficient in teaching the lesson.

The confederate was then brought back to begin the lesson and the experimenter left the room. The subjects administered the lesson and quiz to the confederate, who was carefully rehearsed to ensure standardization across subjects. The confederate answered 70% of the items correctly. Because of the nature of the items, this performance appeared consistent with both student expectation conditions. The confederate was blind to subject experimental condition.

After the lesson and quiz were completed, the experimenter returned and told the student (confederate) that her role in the study was complete and that she could leave. The experimenter then returned and asked the subjects to complete a series of fifteen 11-point, Likert-type items measuring attitudes toward the student, lesson, and their own performance as teachers. Subjects were then debriefed and given the opportunity to ask questions, and the real goals of the study were explained. Six subjects expressed suspicion regarding the procedure; their data were removed from the analysis.

Method of Analysis

Results on the attitudinal scales subjects completed after teaching the lesson were entered into a varimax rotation factor analysis to create a set of combined, higher-order variables. Two factors emerged which were relevant to the hypotheses: one encompassing ratings of the student, and one regarding ratings of the self as a teacher. Hence two composite scores were determined for each subject, and these were entered into a 2 (locus of control level) x 2 (student expectation) x 2 (self expectation) analysis of variance.

The major analysis consisted of two planned comparisons that directly tested the hypothesis of the study. To test the hypothesis that external subjects would be more receptive than internals to information regarding student competence, the comparison contrasted the magnitude of the difference between the positive and negative student expectations for the externals as compared to the magnitude of difference for the internals. The hypothesis that internals would be more susceptible to information regarding self-proficiency than externals was tested by a second comparison, comparing the magnitude of difference between ratings in the positive and negative teacher (self) expectation conditions for the internals with the difference between ratings in the positive and negative teacher (self) expectations for the externals.

Results

Two items in the questionnaire assessed the effectiveness of the expectation manipulations, and results showed that the manipulations were effective. Subjects in the positive student expectation condition rated the student as having more ability than those in the negative student expectation condition, and subjects in the positive teacher (self) expectation condition thought they had significantly more ability than those in the negative teacher (self) expectation condition.

Ratings of student. The analysis of variance for the combined measure of student ratings revealed a significant main effect for teacher (self) expectation, $F(1,63) = 6.22$, $p < .02$. No other interactions or main effects were significant. Examination of the means showed that subjects in the positive teacher (self) expectation condition rated the

student more positively than in the negative expectation condition. In other words, subjects told they probably would be good teachers rated their students more positively than when they were told they would likely be poor teachers. The mean for the positive teacher expectation condition was 8.23 (where 1 is most negative and 11 most positive) while the mean score for the negative condition was 7.39.

The planned comparison examining the magnitude of difference between positive and negative student expectation conditions for externals versus internals was marginally signficant (t, one-tail = 1.37, $p < .10$). As the first row of Table 1 indicates, there was a trend for external subjects to be more affected by information about their students than internal subjects, as was predicted.

Insert Table 1 about here

In contrast, there was no evidence that internal subjects were more responsive to the manipulation of teacher (self) expectation. A planned comparison comparing the magnitude of difference between positive and negative expectation for internals versus externals (not shown in the table) was not significant, $t = 1.27$, p = n.s. Given the presence of the main effect for expectation about teacher it appears that both internal and external subjects responded equivalently to the information regarding their own proficiency as teachers.

Ratings of self measure. The analysis of variance on the self-ratings once again revealed a main effect for the factor of expectation about teacher (self) competence, $F(1,63) = 18.38$, $p < .001$. No other interactions or main effects were significant. Teachers told that they would likely perform well as teachers rated themselves more prositively

($\underline{M}$ = 7.94, where 1 = most negative and 11 = most positive) than teachers told they would likely perform poorly as teachers ($\underline{M}$ = 6.28).

In contrast to the results on the ratings of student measure, the planned comparison examining the magnitude of difference between positive and negative student expectation showed that, contrary to prediction, internal subjects were more susceptible to information regarding their student's competence than were the externals (see Table 1). The planned comparison was significant, $\underline{t}$ = -2.34, $\underline{p} < .025$. Thus, the results indicated that in terms of ratings of themselves, internally-oriented subjects were more affected by information regarding their student's expected competence than were externally-oriented subjects.

Once again, internal and external subjects were not differentially susceptible to infromation regarding their own expected ability as teachers. The planned comparison on this measure examining the magnitude of difference between positive and negative teacher (self) expectation conditions for internal and external subjects was not significant, $\underline{t}$ = .69, $\underline{p}$ = n.s. The presence of the significant teacher expectation main effect, mentioned earlier, shows that both internals and externals were similarly affected by the teacher expectation manipulation when considering ratings of self.

Discussion

The present experiment examined how teacher expectations regarding their own expected proficiency and their student's probable success would interact with teacher locus of control. It was expected that externals would be more responsive to expectations about their student than would internals, and this hypothesis received weak confirmation--at least when considering subjects' attitudes toward their student. As expected, the

difference in ratings of students in the positive versus negative student expectation conditions showed greater differentiation when made by external teachers than internal teachers. This finding supports the reasoning that externals, who tend to view events as being caused by circumstances independent of their own efforts and abilities, will be more responsive to information about their student's performance than would internals, who tend to attribute outcomes to their own efforts.

Interestingly, however, when we examine results for the dependent variable of ratings of self-proficiency, a very different pattern emerges from that found on the measure of ratings toward student. Here, information regarding their student's probable performance had a considerably greater effect upon the internal teachers' than the external teachers' self ratings. Although unpredicted, this finding can in fact be viewed as congruent with the rationale underlying our original hypothesis. When externals acquire information regarding their student, they may interpret the information as relevant only to the student and being entirely unrelated to their own efforts. This would mean that their attitudinal ratings of the student would reflect such information, but not ratings of their own performance as teachers, since they see their own behavior as unrelated to the student's performance. From the internals' point of view, in contrast, information about a student's likely performance may be seen as related to their own behavior as teachers, and, thus, internal teachers' attitudes about themselves (although not necessarily about their student) would be affected by the expectation. Such reasoning would explain why externals are affected by the information about the student more than internals on measures of attitudes toward the student, while internals are affected by the information more than externals on ratings of self.

The results also show that both internals and externals were affected similarly by information regarding their own probable success as teachers. Regardless of locus of control, subjects who were told to expect to be proficient rated both themselves and their students more positively than did subjects told to expect to do a poor job as teacher. The lack of differential effects for internals and externals has at least two possible explanations. One is procedural: It is possible that the induction of the self-expectation manipulation was so strong and credible that it engulfed individual differences between subjects. This explanation has some credibility, given that an examination of the strength of the manipulation checks using ω^2 tests shows that the teacher expectation manipulation accounted for about twice as much variance (8.9%) as did the student expectation manipulation (4.6%).

A more interesting explanation, however, is suggested by the earlier results of a study by Feldman, Saletsky, Sullivan, and Theiss (1983). In that study, student's expectations about their own likely performance and their teacher's competence were manipulated, and, as in the present study, showed that expectations about the teacher were unrelated to student locus of control. Thus, in both the earlier experiment (in which the subject was a student) and the present one (in which the subject was the teacher), expectations pertaining to the teacher's competence were unrelated to subject locus of control. What these results suggest is that there may be something inherent in the role of teacher per se, and not the specific role relationship between the subject and partner, that may act to inhibit the effects of locus of control in terms of teacher expectations. It is possible, for instance, that in any teacher-student relationship, externals who are told that a teacher is likely to do well or

poorly--whether that teacher is another person or themselves--will view that information as an external cue and hence be responsive to it. In contrast, internal subjects will view the expectancy information in terms of an internal cue regarding the teacher's abilities or behaviors and for this reason be responsive to it. Both the internal and external subjects will appear to be affected similarly by the expectancy information, but the underlying reason will be different. Further research plainly is necessary to elucidate this possibility.

Summary

To summarize our findings, the present study suggests that information given to teachers about their own and their students' competence have an effect upon teacher's ratings of their students and themselves, and that such information is responded to in a highly differentiated manner. Ratings of self and student reflected different patterns according to teacher personality, at least in terms of information about student's expected performance. What the study does not show is whether and how such expectations and attitudes are transmitted to the student. For reasons of experimental control, the student in the present study was a confederate, trained to act in a similar manner with each subject. Thus, we cannot ascertain the effect of such attitudes on the student. Still, results of other studies suggest that attitudes relating to expectations are transmitted to students in a complex series of verbal and nonverbal cues (e.g., Braun, 1976; Feldman & Theiss, 1982; Rosenthal & Jacobson, 1968), and it is reasonable to assume that a student's performance would be affected by attitudes related to the particular expectation held by the teacher.

It is also interesting to recall that teachers given an expectation about their own competence as teachers developed attitudes toward their student congruent with the self expectation. This suggests that telling teachers that they will do, for instance, a poor job, might lead teachers to dislike their students--even after the student may have performed reasonably well (as was the case in the present experiment). Thus, understanding the etiology of various sorts of expectation effects can have important practical implications for understanding teacher-student interaction, as well as understanding the construct of locus of control.

We should, of course, be cautious in drawing generalizations far beyond the present experimental settings. The study employed a one-time and one-to-one teaching situation using peers in the role of teacher. The expectation information was delivered in a fashion that does not closely approximate how teachers learn about their students or their own abilities in actual school settings. Still, the present research suggests that the expectations held by teachers are related to teacher locus of control as well as the specific nature of such expectancy information and highlights the importance of personality factors in teacher-student interaction.

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Table 1

Means for Locus of Control and Student Expectation Manipulation

Measure	External Teachers' Ratings		Internal Teachers' Ratings		Planned Comparison [(a-b)-(c-d)]	
	(a) Positive Expectation about Student	(b) Negative Expectation about Student	(c) Positive Expectation about Student	(d) Negative Expectation about Student	t	p
Ratings of student	8.21	7.68	7.69	7.82	1.37	.10
Ratings of self (as teacher)	7.06	7.46	7.45	6.55	-2.34	.02

Note: Higher numbers indicate more positive responses. Data are presented for the student expectation manipulation.